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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,101	07/01/2003	Brian Carvill	128553-1/GP1-0117	3430

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EXAMINER	
SHIPPEN, MICHAEL L	

ART UNIT	PAPER NUMBER
1621	

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/612,101	CARVILL ET AL.	
	Examiner	Art Unit	
	MICHAEL L. SHIPPEN	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/14/03; 12/11/03*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *See Continuation Sheet*.

Continuation of Attachment(s) 6). Other: IDS of 12/22/03; 04/01/04; 04/08/04; 02/16/05.

DETAILED ACTION

Claim Rejections - 35 USC § 112[1]

Claims 1-26 are rejected under 35 USC 112, second paragraph, as failing to particularly point out the claimed invention. It appears that the term "ketone" has a distorted meaning. In claim 8 the term is indicated to embrace the compounds specifically recited. The normal meaning of ketone would not embrace these compounds. If the term is distorted to embrace compounds that are not normally considered ketones, it cannot be determined what other compounds may or may not be within the purview of the term as used by applicant.

Claims 6-8 are rejected under 35 USC 112, second paragraph, as failing to particularly point out the claimed invention. The use of the term "comprises" to define a group is indefinite since the term is open ended. The full scope of the group contemplated cannot be determined. Language such as "selected from the group consisting of" is suggested.

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[1] The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 112 that form the basis for the rejections under this section made in this Office action:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.
>
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim Rejections - 35 USC § 102[2]

Claims 1-3, 5-7, 9, 10, 11, 12 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 5,302,774. Note the examples.

Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by USP 5,302,774, JP 57-31629, JP 10-21257 or JP 10-251180. Each reference disclose a process of reacting a ketone with a phenol in the presence of water. The references clearly teach that the addition of water improves catalytic activity. The selectivity recited in the claim as to the *para para* isomer appears to be inherent in the products of the prior art.

Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by USP 5,302,774, JP 57-31629, JP 10-21257 or JP 10-251180. Each reference discloses a process of reacting a ketone with a phenol in the presence of water. The reference do not exemplify a first and second flow rate. However, one practicing the prior art process would inherently carry out the claimed process. Over time one would necessarily vary reaction parameters and inherently generate a variety of flow rates. This is particularly true since periodic adjustments are made in manufacturing process all the time to maximize output. This would also read on normal variances found in the feed rates of any manufacturing process over time. The claims read on these embodiments since

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[2] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

there is no requirement that the first and second flow rates be carried out in any particular order or time frame.

Claim Rejections - 35 USC § 103[3]

Claim 1-23 rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,302,774 in view of USP 4,400,555, USP 4,822,923, USP 4,859,803 and admitted prior art[4]. USP 5,302,774 is applied as above. In addition to the examples, the reference teaches other obvious embodiments. The reference teaches other phenols and/or ketones may be used (lines 33-37 of column 2), that various ion exchange resins or mixtures may be used (lines 38-58 of column 2), that reaction parameters may be varied (the last full paragraph of column 2). These prior art embodiments embrace specific reaction parameters recited in some of the dependent claims. As to the claims that recite recycle of the reaction mixture, this a known economical expedient particularly where by product isomers are set to an isomerization step as shown by USP 4,822,923. The use of multistage processing is also recognized in the art to afford advantages as shown by USP 4,400,555 and USP 4,859,803. One would expect to obtain the same advantages in the prior art process by the use of such stage reaction systems. Claim 23 merely recites conventional admittedly known methods of using the

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[3] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[4] The admitted prior art is that bisphenol A is a known monomer for the preparation of polycarbonates, see Section [0002] of the specification.

prior art product to make polycarbonates. This is the principle use of bisphenols prepared in the prior art method. No patentable significance is seen in reciting a conventional step to prepare polycarbonate. With respect to multi-step synthetic procedures involving a combination of individually well known chemical reactions, it has been held that one of ordinary skill in the relevant art is charged with knowledge of the individual chemical reactions and their combination to produce a desired end product would have been obvious, *In re Payne*, 203 USPQ 245; *In re Winslow*, 151 USPQ 48; *In re Kamlet*, 88 USPQ 106.

Claim 24 and 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,302,774, JP 57-31629, JP 10-21257 and JP 10-251180 in view of admitted prior art[5]. USP 5,302,774, JP 57-31629, JP 10-21257 and JP 10-251180 are applied as above. Besides the examples, the reference suggest that reaction parameters may be varied to obtain similar results. It is well within the skill of the artisan to carry out these variations as taught by the references. The claims read on these obvious variations. Claim 25 merely recites conventional admittedly known methods of using the prior art product to make polycarbonates. This is the principle use of bisphenols prepared in the prior art method. No patentable significance is seen in reciting a conventional step to prepare polycarbonate. With respect to multi-step synthetic procedures involving a combination of individually well known chemical reactions, it has been held that one of ordinary skill in the relevant art is charged with knowledge of the individual chemical

[5] The admitted prior art is that bisphenol A is a known monomer for the preparation of polycarbonates, see Section [0002] of the specification.

reactions and their combination to produce a desired end product would have been obvious, *In re Payne*, 203 USPQ 245; *In re Winslow*, 151 USPQ 48; *In re Kamlet*, 88 USPQ 106.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,302,774, JP 57-31629, JP 10-21257 or JP 10-251180. Each reference disclose a process of reacting a ketone with a phenol in the presence of water. The reference do not exemplify a first and second flow rate. However, one practicing the prior art process would inherently carry out the claimed process. Over time one would necessarily vary reaction parameters and inherently generate a variety of flow rates. This is particularly true since periodic adjustments are made in manufacturing process all the time to maximize output. This would also read on normal variances found the feed rates of any manufacturing process over time. The claims read on these embodiments since there is no requirement that the first and second flow rates be carried out in any particular order or time frame.

Information Disclosure Statement

In view of the a large number of documents submitted, it is requested that applicant provide a concise explanation of why the documents are being submitted and how they are understood to be relevant, particularly, if applicants are aware that one or more documents are highly relevant to patentability. Applicants should note that 37 CFR 1.56 only requires that applicants submit a listing of references known to be "material to patentability" of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Michael L. Shippen** whose telephone number is **(571) 272-0647**. The Examiner's normal tour of duty is 7:30 AM to 4:00 PM. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(571) 272-1600**. The official group FAX machine number is **571-273-8300**.

MShippen
March 21, 2005

MICHAEL L. SHIPPEN
PRIMARY EXAMINER
ART UNIT 1621